

Manas Joshi

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WORK EXPERIENCE

Perennial Systems | Software Developer

June 2021 - June 2024

- Reduced client subscription time by 45% by creating a new **Spring Boot microservice** and integrating with **ZOHO CRM API** for automated recurring invoice generation, collaborating with a team of six.
- Enhanced scalability by separating 7 **Spring Boot** microservices from a monolithic architecture and automated **Jenkins** deployment for faster development.
- Strengthened system security by faster authentication process by integrating **JWT(JSON Web Token)** in **authorization framework**.
- Decreased mailing expenses by 23% through strategic use of **AWS's SES** bulk email solutions.
- Enhanced client accessibility and increased speed by 56% by migrating subscription and session validation from **SQL to Redis**.
- Optimized server load by 13% by introducing **Redis** as a cache in the metering framework, using the **JEDIS library**.
- Improved corporate client login experience by 30% by developing a proprietary **SAML-SSO** authentication library, adhering to **SAML RFC** specifications and incorporating continuous feedback from the team lead and CTO
- Led a proof of concept to enhance the **OAuth framework** by introducing caching into the existing system, which used **SQL views**.
- Optimized token retrieval by combining authorization and government token requests into a single call, utilizing **JWT** wrapping with **Spring Security's OAuth library**.
- Interacted between teams involved in the product development cycle and also led a team of three members, conducting scrum meetings, code reviews, writing **JUNIT** test cases, and design documentation, while interacting with stakeholders for project scope management, including design reviews and technical feasibility evaluations.

Simmi Foundation (NGO) | Web Development Intern

January 2019 - May 2019

- Increased fundraising by 22% increase in customer footprints and 29% donations by revamping the landing website of the NGO.
- Enabled seamless donation by integrating the Paytm Payment Gateway using Paytm's **PHP** software development kit.
- Created a **CMS** for managing fundraisers, events, galleries, blogs on websites using **PHP, MYSQL**.
- Led a team of five interns and developed a **project roadmap** in **JIRA** to achieve the technical goals of the organization.

EDUCATION

Illinois Institute of Technology

Master of Science in Computer Science

May 2026

Chicago, IL

Savitribai Phule Pune University

Bachelor of Engineering in Computer Engineering

July 2021

Pune, India

PROJECTS

Speech Recognition Using Lip Reading | Natural Language Processing

- Combined Convolutional Neural Networks (CNNs) and Long Short-Term Memory (LSTM) networks to improve speech-to-text accuracy using visual lip movements, enhancing performance in noisy environments and with multiple speakers.
- Integrated Mel-frequency cepstral coefficients (MFCCs) for lip movement analysis and Dlib for precise face and lip detection.
- Applied the TCD-TIMIT dataset (13,826 video clips with diverse sentences) for training, focusing on specific lipspeakers and sentences to improve lip-reading accuracy.

House Price Prediction | Machine Learning

- Developed and trained a linear regression model which predicts the prices of houses in different states.
- Preprocessing - Data cleaning, identifying and removing outliers.
- Accuracy of the model – 94.2%.

Certification

- Getting Started with Python | University of Michigan | Coursera.
- Python Data Structures | University of Michigan | Coursera.
- The Fundamentals of Digital Marketing - Google | Coursera.

SKILLS

Java, C, C++, Python, NodeJs, ReactJs | Spring, Spring Boot, Spring Security, Auth Frameworks, Laravel, Flask, Django | Redis, MySQL, MongoDB, DynamoDB, Firebase, Cassandra Redshift | AWS, Azure, GCP | Jira, Confluence, Git, Bitbucket | Jenkins, Docker, Kubernetes, Heroku, Nelfify, Zapier | Machine Learning, Cloud Computing, Data Visualization, Product Management, Business Intelligence, Software Development, Web Development